

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Product Name: AMCO 4613 CAS number: N/A - mixture
Chemical Name & Synonyms: N/A - mixture
Appearance: Water clear liquid with no characteristic odor.
Use: Bottom flux for base soldering of light bulbs.
Manufacturer: Force Industries Division Tel. 610-647-3575
EMERGENCY PHONE No. CALL CHEMTREC (800) 424-9300 * Available 24 Hours

II. CHEMICAL COMPOSITION

<u>Material</u>	<u>SARA III</u>	<u>CAS Number</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Glycerine	----	56-81-5	10 mg/m ³	ACGIH
Monoethanolamine.HCl	2.0- 10%	2002-24-6	3 mg/m ³	Eye Irritant

Others, if any, are non-hazardous and are claimed as trade secret.

Hazard Rating: HMIS: (H =3 F=0 R=0 PE=C) NFPA: (H=3 F=0 R=0)

III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement: Warning - Irritant to skin, eyes and respiratory system.
Effects of Chronic Exposure: May cause liver and kidney damage..
Effects of Acute Overexposure
Swallowing: May cause nausea and diarrhea. Chemical burns to digestive system.
Skin Absorption: None currently known.
Inhalation: Irritant to respiratory system. Inhalation of vapors may result in giddiness, headache, or dizziness. Existing lung disorders will be aggravated.
Skin Contact: May cause chemical burns, dermatitis. Existing skin disorders may be aggravated.
Eye Contact: Irritation to eye surfaces. Possible damage to the eye.

IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call a physician at once or your poison control center.
Skin: Wash hands with soap and water to remove all residue. If rash develops, consult a physician.
Inhalation: Remove to fresh air. If vapors are inhaled, call a physician.
Eyes: Flush with water for at least 15 minutes to remove all residue. Promptly get medical help. Contains hydrochloric acid.

V. FIRE AND EXPLOSION DATA

Flashpoint (°F): N/A
Flammable limits in air: LOWER: N/A UPPER: N/A (% by volume)
Extinguishing media: Dry chemical or CO₂
Special firefighting procedures: Wear protective clothing
Unusual fire and explosion hazards: None

VI. REACTIVITY INFORMATION

Stability considerations / Conditions to avoid: Stable / Heat, sparks, open flames
Hazardous polymerization / Conditions to avoid: Will not occur / None
Incompatibility / Conditions to avoid: Concentrated acids, oxidizers, and alkalis
Hazardous combustion or Decomposition products: Carbon monoxide and/or carbon dioxide

VII. SPILL AND LEAK RESPONSE

Steps to be taken if material is released or spilled: Contain spill, absorb, sweep-up. Remove to chemical sewer. Flush area to chemical sewer.
Waste disposal method: Dispose of in accordance with all federal, state, and local regulations.

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VIII. SPECIAL PROTECTION EQUIPMENT

Respiratory protection: If the workstation is not properly ventilated to exhaust all fumes and vapors, use a NIOSH approved mask.
Ventilation: Maintain airflow away from user to remove all fumes and vapors, so that the PEL is never exceeded.
Protective gloves: Chemical and oil impervious.
Eye protection: Chemical tight safety goggles. Do NOT wear contact lenses.
Other protective equipment: Full protective equipment normally used in a soldering operation so as to prevent any contact.

IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Wash hands thoroughly after handling to remove all residue. Store material under ambient conditions. Vent drums occasionally.
Other precautions: Remove and professionally wash contaminated clothing before re-use.

X. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F @ 760 mmHg):	>212	Specific gravity (H ₂ O = 1 @ 72°F):	1.241
Vapor density (air = 1):	N/A	Vapor pressure:	N/A
Percent volatiles by volume:	N/A	Solubility in water:	Appreciable
Evaporation rate (butyl acetate = 1):	>1		

XI. OPTIONAL INFORMATION

Department of Transportation: Domestic Ground
Proper shipping name: Corrosive liquids, N.O.S (Ethanalamine, Hydrochloric acid)
Hazard Class: 8
ID & Packing Group Number: UN 1760, PG II
ERG Guide Number: 154

Toxic Substance Control Act: All components of this compound are listed within the TSCA inventory.

SARA Title III Program: This product contains the following toxic chemicals subject to the reporting requirements of EPCRA of 1986 and 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material.

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Concentrations</u>
None	None	----

State Right-to-Know Programs:

Pennsylvania: This product contains the following chemicals listed in PA Code Title 34, Hazardous Substance List: None.

California: This product contains the following compounds subject to the reporting and labeling requirements of Proposition 65: None

NOTES: NA=Not Applicable NE=Not Established R=Reactivity PE=Personal Equipment
H=Health F=Fire

While we believe all information presented herein is accurate and reliable, the data are not to be taken as a guarantee or representation of any kind for which Force Industries assumes legal responsibility. They are offered solely for your consideration, investigation, and verification.